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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,735	04/04/2002	Guenther Mueller	420/50943	3056
23911	7590	03/19/2004	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			GARBER, CHARLES D	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,735

Applicant(s)

MUELLER ET AL.

Examiner

Charles D. Garber

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 02/10/2004 have been fully considered but they are not persuasive.

Applicant argues Takashi does not disclose adaptor as a tube formed as a $\lambda/4$ resonator having a length which is adapted to the excitation frequency of the pistonphone to amplify the sound pressure produced in the pistonphone volume as well as a high pressure adapter.

Reiterating discussion of Takashi below Examiner considers the portion of the chamber 3 within body 2 to be substantively equivalent to the resonator 6 shown in figure of the instant invention whereas the portion of the chamber 3 within the body 1 is the variable volume. Furthermore, part 12 with seal 15 of Takashi is substantively the same as items 7 and 8 respectively as shown in figure 1 of the instant invention which define the "high pressure adapter". Part 12 expands from the opening 13 in body 2 and with the seal will effect a high pressure connection to a sensor or microphone in the same manner as in the instant invention. Examiner did not indicate that chamber 3 of Takashi is a high pressure adapter as Applicant asserts. Furthermore, Examiner's reliance upon case law *In re Hutchison* is considered appropriate as at issue In re Hutchison was not the fact that the limitation following the phrase "adapted to" was in the preamble but the fact that the limitation followed the phrase "adapted to" and did not constitute a limitation in any patentable sense. The limitation at issue in that case being in the preamble was immaterial to the decision. In this case the tube like portion of

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chamber 3 within body 1 may function to amplify sound produced by a pistonphone depending on frequency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (JP405049097 English language abstract only provided by Applicant as IDS document AK) in view of Barham ("The NPL Laser Pistonphone" provided by Applicant as IDS document AR).

Regarding claim 1, Takashi discloses a large sound pressure provision device for measuring and in particular calibrating microphone characteristic. The device is a pistonphone having pistons 11 and a volume adjustable by relative movement of cup like members 1 and 2 to produce varying sound pressure.

The cylindrical chamber 3 in cylindrical cup 2 is a $\lambda/4$ resonator as the specification recites that a $\lambda/4$ resonator is simply "a tube with a constant diameter." (see paragraph 0010) that is closed at one end (the top is shown in the figure to be closed) and opened at the other (the hole 13 shown in the figure is an opening).

It has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138. In this instance the recitation that the device is "adapted to the excitation frequency of the pistonphone to amplify the sound pressure produced in the pistonphone volume" may perform this function for a pistonphone depending on its frequency.

The opening 12 and ring 15 are an adapter opening with a sealing ring for a soundproof of connection to said sound pressure level sensor to be calibrated. The opening 12 is expanded from opening 13.

The Takashi reference however does not expressly teach a selected excitation frequency.

Barham teaches a pistonphone used for calibrating microphones or sound pressure sensors that may be used over a range extending from 1 Hz to 250 Hz.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to operate a pistonphone over a wide range of frequencies so that microphone pressure response may be calibrated over a wide range of measurable frequencies.

As for claim 2, the chamber 3 as shown is a tube and has a length and a constant diameter which may be designated (L) and (d).

As for claim 3, the mating threads 4 and 5 may be considered to provide an integral mechanical compensation link and may serve the intended use of improving the soundproof connection of high pressure adapter to the sound pressure level sensor.

Claims 4 and 5 are considered to be substantively equivalent to claims 1 and 3 as discussed above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Garber whose telephone number is (571) 272-2194. The examiner can normally be reached on 6:30 a.m. to 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cdg

A handwritten signature in black ink, appearing to be 'CDL' or similar, written in a cursive style.